CONEXANT

Audio/Video Reference Design

CX23880/CX23416

Scalable and Highly Integrated Hardware MPEG Encoder PCI Design

Conexant's innovative semiconductor solutions are driving information and home entertainment networks worldwide. With the audio/video reference design, the CX23880 audio/video broadcast decoder is combined with the CX23416 MPEG-2 audio/video encoder to enable PC hardware MPEG-2 PVR (personal video recording) functionality on PCs. The CX23880 provides video decoding capabilities, with the ability to receive video from a tuner, composite, or s-video source, and produce decoded video and VBI data. The CX23416 encoder is capable of converting a stream of decoded video from the CX23880 into an MPEG program stream.

The IC combination, approved by the Windows Hardware Quality Labs (WHQL), allows capture of analog or compressed digital video and audio data to be saved in hardware. This video format can then be used in the creation of DVD, VideoCD (VCD) and Super VideoCD (SVCD) streams for live viewing, time-shifting and archiving applications. Windows XP Media Center Edition is a shell interface for Windows XP that enables personal video recording on the user's PC, which can be used to demonstrate the reference design capabilities.

With this reference design, the user can enjoy these capabilities:

- Watch and listen to TV broadcasts using traditional uncompressed video and audio in the same fashion as standard TV/FM solutions
- Record television programming or baseband video and audio to hard disk via a hardware MPEG-2 audio/video encoder for Microsoft Windows XP Media PC as well as consumer appliance applications such as DVD/VCD/SVCD
- Software decoding of MPEG-2 encoded streams
- Integrated IR remote control decoding

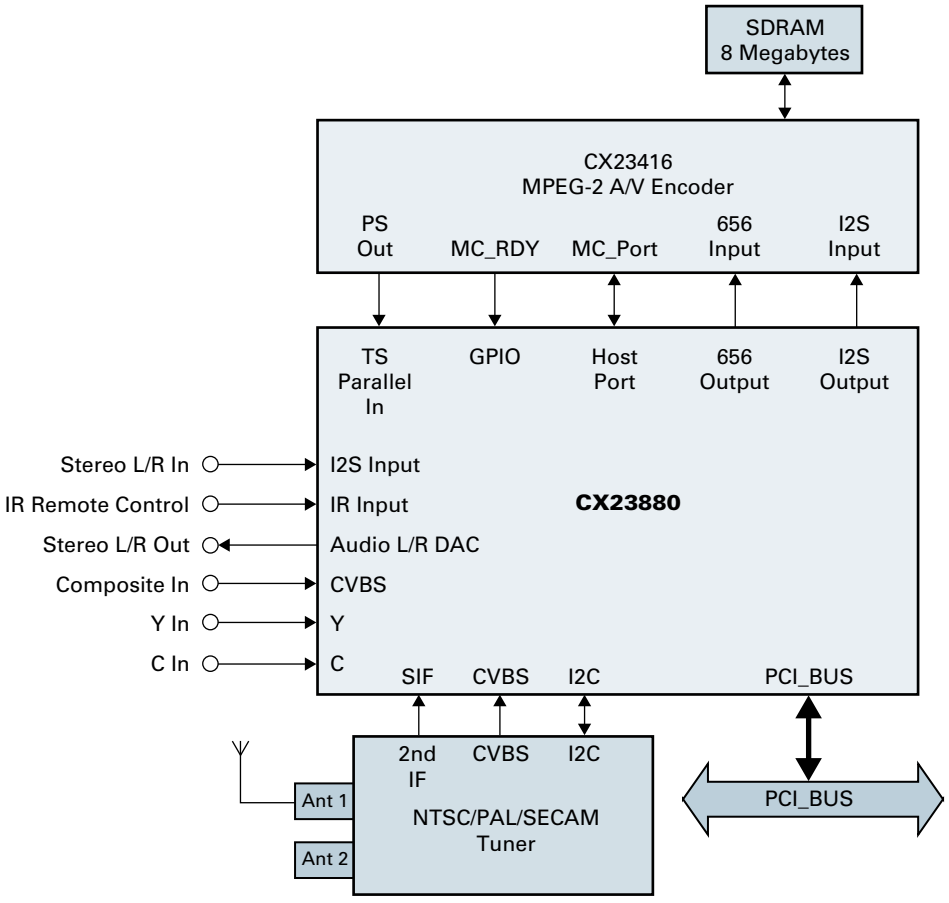
Distinguishing Features

- NTSC/PAL/SECAM video PCI decoder
- Hardware MPEG -1 and 2 encoder
- Built-in remote control
- Temporal noise reduction filter
- Adaptive 2D comb filter
- International broadcast TV audio decoder

Part Number CX23880/CX23416
Description Audio/Video Reference Design

The following components on the reference design are used to provide this capability:

- CX23880 PCI A/V Decoder
- NTSC, PAL, or SECAM Tuner
- CX23416 Audio/Video MPEG-2 A/V Compressor
- Remote control
- EEPROM
- 64 m-bit SDRAM



Hardware Encoder PCI Design Block Diagram

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